AMERICAN FARMER.

RURAL ECONOMY, INTERNAL IMPROVEMENTS, PRICES CURRENT.

"*O fortunatos nimium sua si bona norint*
"*Agricolas.*" . . . VIRG.

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AGRICULTURE.

FROM THE MASSACHUSETTS AGRICULTURAL JOURNAL.

Remarks on Soiling.

[*Communicated by the Hon. Josiah Quincy.*]

(Continued from No. 23, Vol. II. page 178.)

About the first of June, cattle in general were this season turned out to pasture. On the 30th of May, my farmer began to cut the sides of the road leading to my house from the highway and orchard. He continued to soil from this and from grass growing in my orchard until the seventh. On this day he abandoned cutting the grass for soiling, and began to cut from the winter rye. This was found too tough, and it was quitted and my farmer returned to soiling upon grass. Having cut over all the refuse of my grass, by the 24th of June, he then went into the poorest of my mowing land, and afterwards into my clover. From this he continued to soil, until the 6th of July. By this time he had gone over not much short of three acres of mowing land. On the 6th of July, he began to soil from my oats. He continued to soil from these until the 21st of July. On the 21st of July, he began to soil on Indian corn, on which he continued until the 26th, when he began to cut about two acres of late and light barley. On this he continued until the 30th of July, when he recommenced soiling on corn fodder, and continued upon it until the 31st day of August. On this day he began to cut over the road sides, which had been first cut early in June. This was continued only to the 2d of September, when he began to cut the second crop of Indian corn, growing upon the three and one fourth acres of Indian corn, which had now shot up in great luxuriance, from the roots of that, which had been cut over between the 21st and 26th of July. On this soiling continued until the 8th of September.

On the 9th, and 10th, he soiled upon about a fourth of an acre of millet and buckwheat. On the 11th, soiled on a second crop of clover. From the 12th to the 15th, inclusive, on corn stalks of about an acre of sweet corn, and on the 16th on a patch of millet and oats. This was continued to the 20th, when he began on two acres of Indian corn sown in drills, on the first of August, on land from which a crop of peas had been previously taken. Soiling was continued on this corn, until the 3d of October. From this time until the 15th of October, the soiling was wholly from second crop grass taken from various parts of my mowing land.

From the 15th of October, to about the 20th of November, they were kept wholly upon carrot and turnip tops arising from the topping of about twelve acres of both; being allowed always one foddering of salt hay. This finished the summer feeding. From this time they are kept wholly upon salt and English hay. The result then of this experiment, so far as relates to land, is the following:

The twenty head consumed the product of
2½ acres, roadsides and orchard.
3 do. mowing land.
3¼ do. Indian corn, cut as fodder.
2 do. late and light barley.
3 do. oats.
2 do. late sown Indian corn after a pea crop.
¼ do. Buckwheat.
1 do. millet, buckwheat and oats.

17 Acres.

This is the whole land which was cut over for soiling; with the exception of the after feed on the mowing land, and the tops of carrots and turnips. In comparing this result with the former practice of my farm, I apprehend the following statement to be just.

I offset the keeping from the 11th of September to the 20th of November, against the old manner of letting the cattle run at large during the autumn months, on the mowing land, to its great injury, by poaching and close feeding,—If this should not be deemed sufficient, I then make no estimate of the difference between keeping fifteen head of cattle, the old stock, and twenty head of cattle, my present stock. After these allowances and offsetts, which no man can doubt are sufficiently liberal, then I state, that my experiment has resulted in relation to land, in this, that I have kept the *same amount of stock, by soiling on seventeen acres of land, which had always previously required fifty acres.* The result is, in my opinion, even in this respect greater than what is here stated. This however, is sufficient to exhibit the greatness of the economy of this mode so far as relates to land.

With respect to saving of fencing, the previous condition of my farm was this. I had at the lowest estimate five miles of interior fence, equal to sixteen hundred rods, which at one dollar the rod was equal, in original cost, to sixteen hundred dollars. And annually, for repairs and refitting, cost sixty dollars. *I have now not one rod of interior fence.* Of course this saving is great, distinct, and undeniable.

In relation to manures, the effect of soiling is not less apparent and unquestionable. The exact amount of summer product I have not attempted to ascertain, but I am satisfied that, every thing considered, it is not less than one buck load per month per head, or on twenty head of cattle, one hundred and twenty load for the six soiling months. In this estimate, I take into consideration the advantage resulting from the urine saved, by means of loam, sand, or some imbibing recipient, prepared to absorb it.

It remains to show that the cost of raising the food, cutting it, and distributing it to the cattle, is compensated by these savings. Upon this point, my own experience has satisfied me that the value of the manure alone, is an ample compensation for all this expense. Leaving the saving of land, of food, and of fencing stuff, as well as the better condition of the cattle, as a clear gain from the system.—As an evidence of this, I state my expenses for labour in conducting the soiling process.

During the month of June, I hired a man to do every thing appertaining to the soiling process, that is, cutting the food, delivering it, taking care of the cattle in the day time, for fifteen dollars the month, he finding himself. In this arrangement it was estimated, that I avail myself of half his labour. At the end of the month I had the manure measured, and I found that the manure collected in my receptacle, which was a cellar under the barn, and not including that which had been made during the four hours each day, in the yard, amounted to fifteen load. A quantity of manure, which I could not have placed on my farm, for thirty dollars; and which I could have sold there for twenty dollars, upon the condition it should be carried away. It cost me as above stated, fifteen dollars, in the labour of the attendant.

During the remaining five months, I added another man, because I found that a great economy in vegetable food, would result from the cutting it into pieces by a cutting knife, and mixing with it about one third of cut salt hay or straw. This was done, and I kept an accurate account of all the labour of cutting the food in the field, bringing it into the barn, cutting it up there, cutting salt hay or straw, to mix with it, mixing this food, and delivering it to the cattle, and found that it amounted to one hundred and forty-eight days' labour. This estimated at a dollar the day, is one hundred and forty-eight dollars, to which adding fifteen dollars paid for labour, in the month of June, the whole expense was one hundred and sixty-three dollars.

The manure at the end of the soiling season, certainly equalled one hundred and twenty loads, and could not have been bought, and brought there, for three hundred dollars. Let it be estimated at only two hundred dollars in value. No man can question, I think, the correctness of my assertion, that the value of the manure obtained, is a clear compensation for this amount of labour; and this including all the expense of labour, connected with soiling.

It remains to be shown, in *what* manner the whole process ought to be conducted, by any one, who may originally attempt it, and also *how far* it is applicable to the farming condition of New-England, and what species of farmers would find their account in attempting it.

(*To be continued.*)

[We are sorry to inform our readers that the sequel of the foregoing valuable Essay of Mr. Quincy on Soiling, is not yet completed, nor will it be until sometime in January next. So soon as it comes to hand it shall be inserted.] *Edit. Am. Far.*

Mr. Jefferson's Mould-Board.

From the DOMESTIC ENCYCLOPEDIA, *first American Edition, with additions, applicable to the present situation of the United States, by* JAMES MEASE, *M. D.*

Plough, in agriculture, a machine for breaking or turning up the soil, by the draught of cattle.

No implement has more essentially contributed to the comforts of mankind than the plough; for, without this contrivance, much time, labour and expense, would be wasted, in digging the ground, and preparing it for the reception of seed. Hence, ingenious men have invented a variety of ploughs, but, as a detail of their various constituent parts, would exceed our limits, we shall confine our attention to an account of such machines as deserve more particular notice.

[The great points to be attended to in ploughing, are, 1. to open a fair regular furrow, and 2, to do this, with as little resistance as possible. It is believed that these advantages are to be obtained, by the use of a plough, to which the mould board invented by THOMAS JEFFERSON, is affixed: and of which the annexed views will give a clear idea.

The following account of this mould-board, and of the principles upon which it is constructed, are taken from a communication addressed to Sir JOHN ST. CLAIR, in 1798, then president of the British board of agriculture, and inserted in the 4th vol. of the *Transactions of the American Philosophical Society, vol. 4, p. 314.*

"The mould-board should be a continuation of the wing of the ploughshare, beginning at its hinder edge, and in the same plane. Its first office is to receive the sod horizontally from the wing; to raise it to a proper height for being turned over; and to make, in its progress, *the least resistance possible*; and consequently to require a minimum in the moving power. Were this its only office, the wedge would offer itself as the most eligible form in practice. But the sod is to be turned over also. To do this, the one edge of it is not to be raised at all; for to raise this would be a waste of labour. The other edge is to be raised till it passes the perpendicular, that it may fall over with its own weight. And, that

this may be done, so as to give also the least resistence, it must be made to rise gradually from the moment the sod is received. The mould-board then, in this second office, operates as a transverse, or rising wedge, the point of which sliding back horizontally on the ground, the other end continues rising till it passes the perpendicular. Or, to vary the point of view, place on the ground a wedge of the breadth of the ploughshare, of its length from the wing backwards, and as high at the heel as it is wide: draw a diagonal on its upper face from the left angle at the point to the right upper angle of the heel: bevil the face from the diagonal to the right-bottom-edge which lies on the ground. That half is then evidently in the best form for performing the two offices of raising and turning the sod gradually, and with the least effort: and if you will suppose the same bevil continued across the left side of the diagonal; that is, if you will suppose a straight line, whose length is at least equal to the breadth of the wedge, applied on the face of the first bevil, and moved backwards on it parallel with itself and with the ends of the wedge, the lower end of the line moving along the right-bottom-edge, a curved plane will be generated, whose characteristic will be a combination of the principle of the wedge in cross directions, and will give what we seek, the *mould board of least resistance*. It offers too this great advantage, that it may be made by the coarsest workman, by a process so exact that its form shall never be varied a single hair's breadth. One fault of all other mould-boards is that, being copied by the eye, no two will be alike. In truth it is easier to form the mould-board I speak of with precision, when the method has been once seen, than to describe that method either by words or figures. I will attempt however to describe it. Whatever may not be intelligible from the description, may be supplied from the model I send you.

"Let the breadth and depth of the furrow the farmer usually opens, as also the length of his plough-bar, from where it joins the wing to the hinder end, be given; as these fix the dimensions of the block of which the mould board is to be made. Suppose the furrow 9 inches wide, 6 inches deep, and the plough-bar 2 feet long. Then the block, Fig. 1. must be 9 inches wide at bottom (*b. c.*) 13½ inches wide at top, (*a. d.*) because if it were merely of the same width with the bottom as *a. e.* the sod, only raised to the perpendicular, would fall back into the furrow by its own elasticity. I find from experience, that, in my soil, the top of the mould-board should overjet the perpendicular 4½ inches in a height of 12 inches, to insure that the weight of the sod shall preponderate over its elasticity. This is an angle of nearly 22°,—The block must be 12 inches high, because, unless the mould-board be in height double the depth of the furrow, in ploughing friable earth, it will be thrown in waves over the mould-board: and it must be 3 feet long, one foot of which is added to form a tail-piece, by which it may be made fast to the plough-handle. The first operation is to give the first form to this tail-piece, by sawing the block, Fig. 2. across from *a. b.* on its left side, (which is twelve inches from its hinder end) along the line *b. c.* to *c.* within 1½ inches of the right side, and to the corresponding point in the bottom, 1½ inches also from the side. Then saw in again at the hinder end from *d. e.* (1½ inches from the right side) along the line *d. c.* The block *a. b. c. d. e. f. g.* drops out and leaves the tail-piece *c. d. e. h. i. k.* 1½ inches thick. The fore part of the block *a. b. c. k. l. m. n.* is what is to form the real mould-board. With a carpenter's square make a scribe all round the block at every inch. There will of course be 23 of them. Then from the point *k* Fig. 2. and 3. draw the diagonals *k. m.* on the top, and *k. o.* Fig. 3. on the right side. Enter a saw at the point *m.* being the left-fore-upper corner, and saw in, guiding the hinder part of the saw along the diagonal *m. k.* (Fig. 2. 3.) and the fore part down the left edge of the block at the fore-end *m. l.* (Fig. 2.) till it reaches *k.* and *l.* in a straight line. It will then have reached the true central diagonal of the block *k. l.* Fig. 5. then enter the saw at the point *o.* being the right-fore-bottom corner, and saw in, guiding the hinder part of the saw along the diagonal *o. k.* (Fig. 3.) and the fore part along the bottom edge of the fore end *o. l.* till it again reaches *k. l.* Fig. 5. the same central diagonal to which you had cut in the other direction. Consequently the pyramid *k. m. n. o. l.* Fig. 4. drops out and leaves the block in the form Fig. 5. You will now observe that if in the last operation instead of stopping the saw as the central diagonal *k. l.* we had cut through the block in the same plane, we should have taken off a wedge *l. m. n. o. k. b.* Fig. 3. and left the block in the form of a wedge, also *l. o. k. b. a. p. k.* which, when speaking of the principle of the mould-board, I observed would be the most perfect form if it had only to raise the sod.—But as it is to be turned over also, the left half of the upper wedge is preserved, to furnish on the left side, the continuation of the bevil which was proposed to be made on the right half of the bottom wedge.—We are now to proceed to the bevil, for which purpose the scribes round the block were formed before the pyramidal piece was taken out; and attention must be used not to mismatch or mistake them, now that they are disjointed by the withdrawing of that piece. Enter the saw on the two points of the 1st scribe where it has been disjointed, which is exactly where it intersected the two superficial diagonals, and saw across the hollow of the block, guiding the saw, both before and behind, along the same scribe, till the fore part of the saw reaches the bottom edge of the right side, and the middle of the saw reaches the central diagonal; the hinder part will of course continue the same straight line, which will issue somewhere on the top of the block. Then enter the saw in like manner on the two projecting points of the 2nd scribe, and saw in, along the scribe, before and behind, till it reaches the same bottom edge of the right side, and the central diagonal. Then the 3d, 4th, 5th, &c. scribes successively. After cuting in several of the earlier scribes, the hinder part of the saw will issue at the left side of the block, and all the scribes being cut, the saw will have left straight lines from the bottom edge of the right side of the block, across the central diagonal. With an adze dub off all the sawed parts to the bottoms of the saw marks, just leaving the traces visible, and the face of the mould-board is finished. These traces will shew how the cross wedge rises gradually on the face of the direct wedge, which is preserved in trace of the central diagonal. A person may represent to himself, sensibly and easily the manner in which the sod is raised on this mould-board, by describing on the ground a parallelogram 2 feet long and 9 inches broad, as *a. b. c. d.* Fig. 6. then rest one end of a stick 27½ inches long on the ground at *b.* and raise the other 12 inches high at *e.* which is 4½ is inches from *d*, and represents the overhanging of that side of the mould-board. Then present another stick 12 inches long from *a.* to *b.* and move it backwards parallel with itself from *a. b.* to *d. c.* keeping one end of it always on the line *a. d.* and letting the other rise as it recedes along the diagonal stick *b. e.* which represents our central diagonal. The motion of the cross stick will be that of our rising wedge, and will show how every transverse line of the sod is conducted from its first horizontal position, till it is raised so far beyond the perpendicular as to fall reversed by its own weight. But to return to our work. We have still to form the under side of the mould-board. Turn the block bottom up. Enter the saw on the first scribe, at what was the bottom edge of the left side, and cut in, guiding the instrument at both ends by the scribe, till it has approached within an inch, or any other distance, according to the thickness you choose of the face. Then cut in like manner all the other scribes, and with the adze dub out the sawed parts, and the mould-board is done. It is to be made fast to the plough by resting the toe in the hinder edge of the wing, which must be made double like a comb case, to receive and protect the fore end of the mould-board. Then pass a screw through the mould-board and helve of the ploughshare, where they touch each other, and two others through the tail piece of the mould-board and right handle of the plough, and cut off so much of the tail-piece as projects behind the handle diagonally, and the whole is done.

"I have described this operation in its simplest mode, that it might be the more easily understood.—But, in practice, I have found some other modifications of it advantageous. Thus, instead of first forming my block as *a. b. c. d.* Fig. 7, where *a. b.* is 12 inches, and the angle at *b.* a right one, I cut a wedge-like piece *b. c. e.* off the bottom through the whole length of the block, *b. e.* being equal to the thickness of the bar of the share (suppose 1½ inches) because the face of the wing declining from the top of the bar to the ground, were the block laid on the share, without an equivalent bevil at its bottom, the side *a. b.* would decline from the perpendicular, and *a. d.* from its horizontal position.—Again, instead of leaving the top of the block 13½ inches wide from *m.* to *n.* Fig. 8, I cut a wedge from the right side *n. k. i. c. p. n.* 1½ inches thick at top, and tapering to nothing at bottom: because I find that the tail-piece, being by this means made oblique, as *c. i.* instead of *k. i.* is brought more advantageously to the side of the handle. The first superficial diagonal is consequently brought from *m.* to *c.* and not from *m.* to *k.* as in the first directions."

In a letter (of 19th August, 1803,) with which the editor was favoured from Mr. J. on the subject of his mould-board, he says; "I have since thought of an alteration in the form of that mould-board, which would recommend it more to common opinion, and perhaps improve it. In the one described in the *Phil Trans.* the toe of the mould-board is at a right angle with the bar, and is lodged in a duplication of the hinder edge of the wing like a comb-case. Bu I would propose to make that duplication parallel with the fore edge of the fin; and two or three inches back from it, consequently the mould-board would be pointed at the toe, instead of being square. To do this, after the pyramidal block is cut out, the fore-right corner of the block should be sawed off by a line leading from the fore-left corner, parallel with the fore edge of the wing. This being done, the bevil is to be formed by exactly the same process, as in the first description. The principle of this is rigorously the same with the first; it is only one of those accomodations of it to different circumstances and views, which practice may produce. It will probably enter and pass on with less resistance; but it will at the same time lose a beautiful and advantageous effect, which I observed produced by the first form, which being flat in front like a wedge, the earth of the furrows rising on it, kept it steadily in the ground, without any wabbling, and without any effort of the ploughman. Its motion was as smooth as that of a ship through the water in a steady wind, and smooth surface."

"These variations will be easy to any one after understanding the general principle. While these mould-boards have been under trial, and essays have been making of greater or less projection for the upper right edge of the block, and of different heights in proportion to the depth of the furrow, I have continued to make them of wood. But now satisfied by a sufficient experience, that for a furrow of 9 by 6 inches, the dimensions I have stated are the best, I propose to have the mould-board made of cast iron.

"I am seasible that this description may be thought too lengthy and elaborate for a subject, which has hardly been deemed worthy of the application of science. But if the plough be in truth the most useful of the instruments known to man, its perfection cannot be an idle speculation. And in any case whatever, the combination of *theory* which may satisfy the learned, with a *practice* intelligible to the most unlettered labourer, will be acceptable to the two most useful classes of society."

ROBERT SMITH, of the Township of Buckingham, Bucks County, Pennsylvania, has obtained a patent from the United States, for a cast mould-board plate, constructed upon mathematical principles, which is much approved of. The editor has been favoured with a copy of the specification, but as no figures explanatory of the progress of the work accompanied it, any description would be unintelligible.* He will

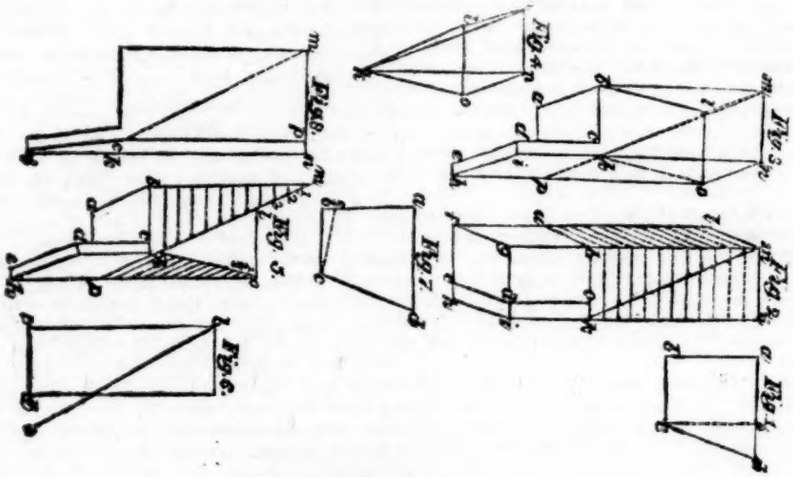
* The patentee's agents, are Robeson and Paul, Philadelphia.

therefore only add the following useful remarks by Mr. SMITH, on the construction of ploughs.

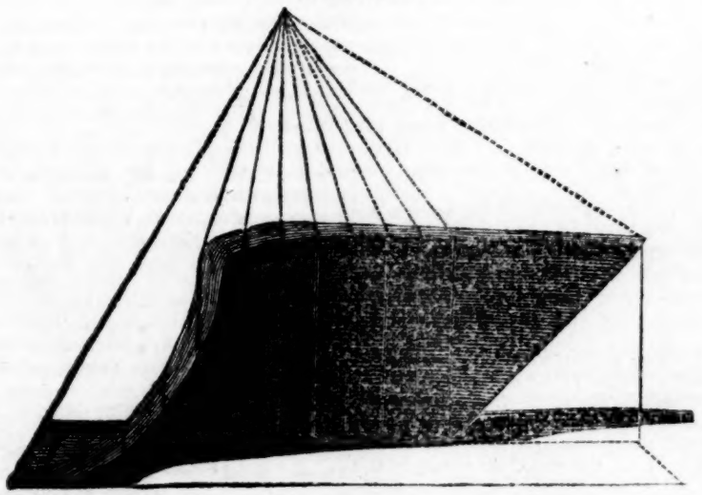
"In constructing ploughs the beam ought to be placed directly over the land side of the plough, so that the cut of the coulter may be square with the cut of the share; and the land should be given to the plough, between the coulter mortice, and the fore end of the beam; for if the cutting of the share and coulter makes an acute angle in the land, then the plough will incline to fall to the right; but if it makes an obtuse angle, then it will incline to fall to the left.—A plough for two horses ought to be not less than nine inches, nor more than ten inches wide in the bottom, and for three horses, from eleven to twelve inches wide. The share should never differ much in width from the plough. The cut of the share and bottom of the plough, should be exactly in one plane. A three horse plough requires no land in its construction. A crook of three inches and a half in the beam before the coulter mortice to the right, will suffice for the land of a two horse plough. A plough with a long beam runs the steadiest, and it being long, prevents the plough from kicking; and long shafts gives the ploughman a greater command of its direction. The cast iron plate ought to be scoured with a grit stone before it is used."

In ploughing down weeds, or long stubble, it is well known, that much trouble is experienced from the difficulty with which they are completely buried. To remedy this a farmer of Pennsylvania, connected, loosely, one end of a small chain to the end of the large swingle tree, and the other end to the coulter, with the desired effect.]

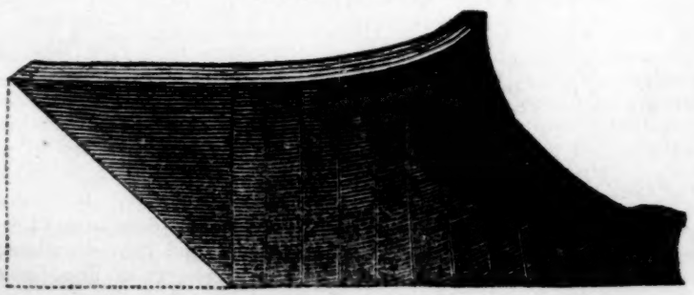
Sections of Mr. Jefferson's Mould-board.



Inside View.



Outside View.



From the New York Statesman.

Forest Trees.

Extract of a letter, dated

CANANDAIGUA, July 1320.

The larch, or pinus larix, takes a high rank among European trees, for the excellent qualities of its wood and bark. "The most barren mountains will grow larches," says bishop Watson, and the experiment has been successfully and repeatedly tried in Scotland, whose bleak and rugged mountains now exhibit vigorous vegetation. From this tree the Venice turpentine is extracted. Taken internally, its resins are aperient, sudorific, diuretic, and stomachic: and applied externally, they are anodyne, detersive, and antiseptic.

In this country there are two species of larch, although they have been generally considered as varieties, and they are denominated tarmarack, or hack metack.—The larix pendula, or black larch, is found in cedar swamps, and the larix micro-carpa, or red larch, on high mountains, according to Pursh. They closely resemble each other, but that they are specifically distinct, has been satisfactorily established by Mr. Lambert, who observed, that they always keep distinct, when raised from seed.

The American larch is said to resemble the European, where there are also two species: but whether they are the same tree, I cannot distinctly say.

This tree has never been transplanted or cultivated in this country. You now and then perceive a solitary one before a court yard. It is a beautiful, ornamental tree, and its rapid growth, and adaption to the most barren soils, recommend it decidedly to the attention of the American agriculturist.

"By cultivation," said bishop Watson, I "mean tillage, pasturage, and plantation." The last, except for fruit trees, is totally neglected in this country. This is owing to the abundance of wood: but even already, the inhabitants of cities have been forced to import their coal from England. Every farmer ought to devote 20 acres to the planting of trees for fuel and building—and using an acre a year, and continuing to replant, the deficiency will be supplied, allowing twenty years for the growth of wood. The Hindoo who plants a tree, digs a well, and has a son, is sure of heaven. It is to be regretted, that some strong and similar inducement does not operate in America.

All the roads and canals ought to be lined with forest trees. The shade will be agreeable, and the view delightful to travellers.

The Americans are a ship building people. A 74, it is calculated will take the wood of fifty acres. Is it not time for them to look out for futurity, and not to anticipate the supplies of distant generations?

In passing from Rome to Syracuse, you see nothing but one great forest, which must contain many millions of cords of wood: but already have the axe and the fire brand been applied, and before the lapse of 50 years these immense woods will fall before the hand of cultivation. What then will become of the great manufactories of salt, unless coal is discovered, or plantation adopted? Both must be attended to—wood will always be required for navigable and architectural purposes. The swamps west of Rome are filled with turf or peat, as I perceived from the canal packet.

Peach Trees.

The cultivation of this tree has become very interesting to gardeners in the vicinity of this city. A very simple mode of preserving and restoring them when apparently nearly destroyed by the disease so fatal to them in this quarter, and commonly called the "Yellows," has been accidentally discovered by a gentleman in this city. A statement of the fact, as it occurred, will convey all necessary information. In the fall of 1818, a very fine tree standing in his yard, was apparently dead from the effects of the above-mentioned disease—throughout the fall and winter very large quantities of common wood ashes were casually thrown by the servants about the root

of the tree. To the astonishment of all who had seen it the preceding fall, it put forth its leaves vigorously the next season, and bore abundance of fine fruit. A small quantity of wood ashes was again thrown round its root last fall, and the tree is now become so full of fine fruit that it has become necessary to prop it up. This is a very simple remedy, and certainly worthy of trial.

The foregoing paragraph is from Mr. Lang's Gazette of this morning. A gentleman has since called upon us, who has tried the same experiment with all the success he could have desired. He wishes us to recommend this simple method of preserving this valuable fruit tree to the public and he also suggests to the New York Agricultural Society, the expediency of having printed hand bills of the above article, stuck up in all the markets, and given to every countryman who attends them, that the information may be as widely diffused as possible.

[*N. Y. Com. Adv.*

BARILLA.

Extract of a letter from Henry Bry, Esq, receiver of public monies at Ouachito, (Monroe) July 1, 1820.

"On the 23d of May I sowed the seeds of * *Barilla fina*, which you transmitted. I shall take the greatest care of the plant if it germinates. He who introduces a useful plant renders an essential service to his country. The successful cultivator is entitled to our gratitude equally with the ingenious mechanic who teaches us how to stem the rapid currents of our mighty rivers.

"Permit me to make a few remarks on the culture of the *barilla*. In my travels in the south of Europe, I took notice of the cultivation of that valuable plant barilla, viz:—*Salsola sativa*, Linn. which he describes, *Salsola diffusa, herbacea, foliis, teretibus, glubris, floribus conglomeratis*, is cultivated in the vicinity of Alicant, in Valencia in Spain, and was, in the beginning of the French revolution, cultivated, with great success and profit, about Arles, and almost from Perpignan to Marseilles. In Spain they sow it in November; in France sometimes as late as April. The seeds must be sowed thickly, as not one half of them are ripe, and the practice is not to wait for their maturity before burning the plant. When sowed in land not salted, (viz. on the sea shore or salt marshes,) the plant degenerates, and the third crop yields almost nothing but potash. In this country it will grow well—the climate is congenial to the plant; but, if I mistake not there can be no great crops, except on the sea shore and about the Salines, which are very numerous in the vale of Mississippi.

Between this place and Natchitoches there is about four or five hundred acres of land in one body, containing a large quantity of muriate de soude, and there it will flourish. Although we now extract the soude from the muriate de soude, (common salt) by the aid of sulphuric acid, yet the value of the soude from barilla will not be much diminished; for, in some particular dyes, the soude of common salt will not answer the intention. If the plant succeeds, I will send seeds to friends who live in the neighbourhood of Salines. I have no doubt it is worth cultivating on the sea-shores of the United States, from latitude 36, to the southernmost cape of Florida. That will be the country for *barilla*.

H. BRY.

The Commissioners of Gen. Land Office."

* The seeds of Barilla Fina were transmitted by Mr. Forsyth, Minister of the United States in Spain. They have been distributed extensively. In the Manufacture of glass, of hard soap, in dyeing, &c. the soda, obtained by the incineration of barilla, is of very great value. J. M.

Gen. Land Office, Aug. 26, 1820.

Parmesan Cheese-Dairy.

We have in a previous number of the Farmer presented our readers with communications from Mr. Jefferson, and Mr. Pickering on the subject of Parmesan Cheese, to which we now add the following extract from a late English publication, entitled "A Journey in Carniola, &c. by W. A. Cadell, Esq. F. R. S."

Edit. Amer. Far.

"On the 14 April (1818,) I went to see a large cheese dairy, three miles from Milan, one of the dairies at which that kind of cheese called in commerce *Parmesan*, is made. It is called in Italy, *Formaggio di grana*, because it is commonly used in a granular form, being grated, and brought to table to be eaten with soup. Much of this cheese is also made near Lodi and Pavia.

The word *Formaggie* is from *Formaticum*, which signifies, in the Latin of the middle ages, cheese prepared in a form.

The cheese is made in the morning before sunrise.

The morning's milk, and that of the preceding evening, are put into a large brass vessel, five feet in height, narrow at bottom, and widening out like a trumpet to three feet diameter at top. This vessel is placed over a fire which is sunk in the ground, and the vessel can be removed from the fire by a crane.

When the milk is heated, runnet, in form of paste, is put in, and a little saffron, to give the cheese the yellow colour.

When the coagulation has taken place, the copper is taken off the fire, the curd is taken out in a cloth, and put within a broad wooden hoop, the sides of which are as high as the cheese is intended to be. This hoop can be straitened by means of a rope. A board is placed on the top of the cheese, and a small weight on the board. The cheese is not put into a press.

After this, the cheese is taken to the salting room, and two cheeses are placed together, one above the other, with broad hoops tightened round them. Much salt is laid on the top of the uppermost cheese; the salt dissolves, and the brine filters through the cheeses.

The cheeses are shifted from one place to another all along the benches of the salting room, and are beaten with a flat piece of wood, cut with straight-lined furrows intersecting each other.

The cheese is next taken to the magazine, where each cheese is placed on a shelf.

The sides of the cheese are painted with a mixture of litmus, otherwise called *tournesol*, and oil, to give them the purple colour. The tournesol is a plant collected in the south of France.

The cheeses are set on the shelf in the same order in which they were made; and the cheeses of each month are placed together.

Those of the month of October and of May are the best, and bear the highest price. The best cheeses can be kept longest, and are improved by keeping for some years.

There was an October cheese which had been kept five years, and was to be sent to the Emperor.

After the great cheese is made, the liquid in the copper is again heated over the fire, and curd is collected from it to make small cheeses, called *Mascarla*.

The number of cows kept for making cheese in this dairy is eighty. They are always in the house in winter, and at this season of the year. They are fed upon grass all the year, except perhaps in December. The house in which they are kept is not above nine feet high to the ceiling. They are not kept very clean. In summer, they go out to the field to feed during the day.

The cows are of a dark colour, and are brought from Switzerland, which is found more profitable than rearing them in this country. The bull is also Swiss, and fourteen months old.

It is estimated that 2000 head of cattle pass the Mount Saint Gothard every year, coming from Switzerland into Italy. Considerable fairs for the sale of the cattle are held at Lugano.

The evening's milk is put in flat copper vessels, three feet in diameter, in order to collect the cream.

There is an ice-house at the dairy, for the purpose of supplying ice for cooling the cream which is put into the churn. This they find facilitates the making of butter at certain seasons of the year.

In the farm-yard is an inscription, commemorating the visit paid to this dairy by the Austrian Emperor and the Archdukes, two years ago."

FOR THE AMERICAN FARMER.

AGRICULTURAL CHYMISTRY.—No. 4.

When the analysis of the chymist has decomposed any substance, which may have attracted his attention, the final result of his operations, will usually eventuate, in an *acid*, a *metalic*, or an *earthy* base; we may therefore conclude, that the immense variety, and forms of matter, are composed only of different proportions of these few simple substances, whether any further reduction can be made to their number, will remain for future discoveries to decide; these are alone sufficient to show the effect of that almighty and wonderful power which has created these substances, and has given to *them* laws by which they have formed, and are daily forming countless millions of new forms and varieties of matter; the light of chymistry as it shines forth ever tends to convince us of the boundless wisdom of what may seem but plain language among the great truths of the Holy Scriptures; already do we see that "mountains and hills," praise the Lord, and will "magnify him for ever," and how wonderfully just appears the holy expression that, "the Lord is able to raise up from these stones, seed unto Abraham." When we find by our progress into the knowledge of science, that there are *daily* raised up thousands of human beings, and millions of animated bodies from the dust of the earth by the process of vegetation, from the soil, and the rise and change of that vegetable matter into animal bodies, these, if we analyse them, become again reduced into an acid, metalic or an earthy matter. I am however, deviating from that outline of system, which I had pursued in the numbers already furnished, but it is difficult to advance in the paths of science, without occasionally stopping to enjoy the expansive, and wonderful views which are stretched out before us. The system which I have in some measure pursued, commences with the theory of vegetation, proposed in my first number; this theory being founded on actual experiment, and connected with the action of earthy and saline substances (or manures) on vegetable life, may be considered the basis of this system, and in connexion with the mineral substances which I have already noticed, I shall proceed to the consideration of the *sulphuric acid*, which is commonly found in the earth connected with a metalic or earthy base; with metals, its combination with iron is the most common, and with earths, it is usually found in a small proportion in the alluminous. Its presence in any *sensible degree to the taste* is destructive to vegetation, all *its combinations* as far as I have been able to judge from experiment and observation, are highly beneficial to vegetable life, when used in small proportions, or in connexion with other saline substances or vegetable matter. In those districts of country which are denominated "Slate Lands" on mountains, and hilly situations, there exists a kind of sulphuret of iron, (or natural combina-

tion of sulphur and iron,) which on exposure to the surface, or atmosphere, becomes decomposed by the absorption of oxygen, by which the sulphur becomes acidified, when the quantity of iron is small, in proportion to the sulphur, there will be an excess of acid, there will consequently be no vegetation where this process is going on; the excess of acid is taken up by the first stratum of clay, in which it usually finds a small proportion of iron which it combines with and changes the colour, as well as consistency of the clay, and by this means produces the crumbling kind of hills and ravines which are frequently met with. That proportion of acid which is washed off by the rains, goes eventually to produce the gypsum, or sulphate of Lime. I shall proceed to show how this combination is produced, and will designate those districts of land in which the sulphurets abound by a common, though not always correct, appellation of "Slate Lands," and those districts in which the calcareous earths abound, and where the carbonate of lime appears on the surface, as "Limestone Lands." The latter usually make their appearance in extensive valleys; the former is mountainous, and hilly situations: having these circumstances in view, the formation of gypsum will be evident in the following process. The most remote sources of water from the permanent streams, is always in the hills and mountains; in those situations the "Slate Lands" are predominent, and the springs and streams are saturated with sulphuretic combinations, these are carried in their course to the valleys of limestone lands, where the springs are copious and very generally saturated with carbonate of lime; when these small streams from the limestone springs, flow into those streams which arise in the mountains, the law of chemical affinity is immediately brought into action, and the sulphuric acid leaves its metallic base to combine with the lime, forming the sulphate of lime, or gypsum, the carbonic acid of the limestone is disengaged from its basis of lime, and exchanges its place for the iron, or base, that was occupied by the sulphuric acid, forming the carbonate of iron, which is usually the character of those rich iron ores which are found embodied in limestone; this carbonate of iron, is the first substance which the water deposites. It may therefore be found nearer the sources of the streams, than the gypsum, or sulphate of lime, which being held partly in solution, is carried to a greater distance, and is not deposited until a situation favourable to *evaporation*, or *rest*, occurs to induce its deposition. Its situations favourable to the deposition of the gypsum should not occur in the river's course, it will consequently be carried to the ocean.

These observations relative to the *formation* of gypsum are made with a view of directing the attention to those places near our rivers, (which have their sources in mountainous and limestone lands,) which have been favourable to the deposition of that valuable mineral; and to further this object, I would direct the attention particularly to *such* alluvial formations along the Potomac river; this river having its rise and sources in various mountainous, slaty and limestone districts, the quantity of sulphate of lime which has been formed, and is continually forming on this great river, must have its place of rest, either in some of the alluvial situations formed in its course from the mountains, or in that part of the river where it meets the tide water.

The great utility of gypsum in agriculture, arises from the fondness which most plants of the grass kind have for saline substances which contain the sulphuric acid, and the very small quantity of such substances that are necessary for supporting vegetation; this property, is not however peculiar to the sulphuric acid, the combinations of the nitric acid, appear to have a much more powerful effect, and consequently a still less proportion of *them* will produce the same effect. Gypsum being a natural production, which is obtained at a very little expense, has claimed the entire attention of agriculturists, while other saline substances of the same utility, and more active in their operations, are comparatively unknown to them. That the action of the sulphate of lime or gypsum on vegetation, is *chiefly* owing to the sulphuric acid, is perfectly evident from the circumstance of its being used with success on limestone lands, where there already exists an excess of its base (lime,) there consequently is no additional substance to the soil, but the sulphuric acid; when applied to lands which contain no limestone its operation is still more useful, by furnishing a small proportion of lime; the effect of the lime is to render the acid neutral, and to prevent too large a portion from acting on the plant at once; the acid if applied alone, would be destructive and unprepared for the use of the plant, it would also be carried off by water, or taken into combination by the affinity of some of the earths for it; lime uncombined is not less destructive to vegetation. It is an infinite wisdom which has given these two substances laws of action to seize upon others which render them neutral, and useful; was lime or sulphuric acid permitted to remain on the earth after their formation, without any operating law of their own to combine with other substances, the world by this time would have presented a scene of wild, and barren desolation; but, by the wonderful laws which they possess, they produce substances of the most powerful fertilizing powers, which when scattered by the industrious hand of man, become the source of comfort, and happiness to him, and of gratification and health to that pertion of the brute creation, which appears to be placed under his especial care.

Many attempts have been made to get at the "modus operandi" of gypsum by means of the imagination, but that method having proved very unsatisfactory, I shall endeavour to account for it by the *actual operation* of this interesting mineral. When gypsum is strewed on the soil in powder, it immediately becomes softened by the dampness of the earth, it remains in this state of preparation, until the earth becomes furthur saturated with water, either by rains, or cappillary attraction. The gypsum being soluble in about five hundred times its weight of water, imparts itself to the earth in solution at the rate of 1 lb. for every 500 lbs. of water in the soil, this solution acts as a stimulant to the roots of vegetables, and induces them to stretch forth a greater number of small fibres; in search of this enticing food, the growth of the plant above ground is proportionally increased to the number of fibres which are exerted to support it, and as long as these fibres find any thing to exert their action on, they continue to supply the parent plant, as they perform the same duties to the plant that the secretory vessels of the stomach does to animal life: in this respect the soil may be considered the stomach of plants, and the small fibres the secretory vessels; the extreme delicacy with which these vessels effect a change of the substances, presented to their action, has so far eluded the prying reach of man, both as it respects animal, as well as vegetable life: we can therefore only behold and admire the effects of that infinite wisdom which has commanded the most delicate fibre of a plant, to change by a certain, and silent operation, the sulphate of lime into a vegetable matter. A. B. M.

TO THE EDITOR OF THE AMERICAN FARMER.

Sir,—In a considerable portion of the state of Maryland, the offal of corn, particularly the blades and tops of the plants, form a very large share of the best winter food of our horses and cattle. I am told, indeed, that the most knowing of the gentlemen of the turf consider nicely cured blades as the choicest long food for their nags, when in severest training.—It is generally supposed, however, that stripping the plant at the time necessary to secure the best crop of fodder, detracts more or less from the crop of corn, by preventing the ear and grain from filling as perfectly, as they otherwise would.—By some experiments of Mr. Lorrain of Pennsylvania, if I recollect right, he states the loss at $\frac{2}{9}$, or more than 20 per cent.—If this be the fact, as this species of fodder is absolutely necessary to many farmers in both Maryland and Virginia, and perhaps in some other states, it is a question of no small interest in what order these operations may be performed with least injury to the crop of grain.—As regards the crop of provender, farmers pretty generally agree, that the blades should be first secured; but as regards the injury to the crop of corn there is a great division of opinion. The gentlemen agriculturists and theorists range themselves on the side of cutting the tops first.—The practical, the labouring farmers, small land holders, tenants, and intelligent overseers pull the blades first.—Several years ago, at the usual time I pulled the blades from every other row of corn on a small piece of my field, and cut the tops of the alternate rows.—In noting the effects of this experiment I observed, that the blades, and the husks or cover of the ears dried much faster on the plants without the tops, than the blades of the tops and husks of the ears on the plants, that had been stripped of the blades below the ears. And the object to be effected in the order of the operations being to continue the nourishment to the ear as long as possible, I felt satisfied that the facts in the case were with the common farmers, and have ever since pulled my blades first.

The theorists tell me, "you are certainly wrong," for, say they, "you may head down a plant not only without injury, but with advantage."—I consider it sufficient to reply,

gentleman, there is a time for all things. If you head down a plant or tree early in the spring, it will often put out a more vigorous shoot; but if you head down this same plant or tree in August or September, you will not only stop its growth, but generally kill it.—Besides, says the practical farmer, who has often performed the work with his own hands, stripping the blade offers little or no violence to the plant—for, if the plant be so far advanced, that the silk of the ear has become tolerably dry, and the barrel of the blade, or that part, which encircles the stock, has become tough, though the operation entirely denude the stock, the ear is then so nearly ripe, as not to be much injured by it.—But in every field while many plants are thus far advanced, and the time has arrived, when you should begin this work, many will still have the silks more alive, and the blade, fresh and green. In this stage they will also be brittle, and instead of the stocks being stripped by the operation, the stem of the blade will break at the barrel, leaving a covering to the stock, and scarcely wounding it. This view of the question has long since settled my practice. But when you add to these facts what appears to be now well established, that the food of plants ascends through the heart or body of the trunk, and after being elaborated in the leaves, nourishes the fruit, and produces the principal increment of the plant in its descent under the skin; the perfect propriety of leaving the top part of the plant undisturbed as long as possible, seems to be established beyond controversy. In doing every thing, out of a great choice of modes, there is but one best; and it is of great consequence particularly in agricultural operations to be certainly in possession of the knowledge of this best. Should these few remarks tend to fix the order of these operations, they will be far from useless.—The work of saving both the blades and tops ought if possible to be completed before the equinoctial storm. and this may be generally effected, and under my view of the subject, with very trifling injury to the ear, by beginning the blade pulling a few days, even a week earlier than usual, and completing it before you cut a top—thus the whole business may be accomplished by the middle of September—and if the farmer will then turn to, and cut off his corn stocks by the ground, and take them to his barn-yard, corn and all, keeping the cutting and carting in forward of his wheat seeding ploughs, and have his stocks with the corn on them neatly ricked up; beginning the rick narrow, not more than five feet, at base with buts down and ears up, and continued in a long string, coming back every two or three days, and doubling and trebling it, till his whole corn crop is secured in a weather proof rick ten or twelve feet wide, and as many high; he will have taken his corn entirely out of the way of his wheat seeding, and will, in my opinion, have secured it better, and with less shrinkage of the ears, than the Virginia farmers, who take off corn, blades, tops, and all at one operation.

What I have given was the best practice of John Singleton, the discoverer of Marle on the Eastern Shore of Maryland.

CORN PLANTER.

FOR THE AMERICAN FARMER.

On the Rust of Wheat.

Mr. Skinner,—In the pages of the American Farmer, I have no recollection of seeing any observations relative to the rust of wheat, which proves so destructive to the wheat cultivated on moist and flat land. In the year 1804, the crops of England were almost entirely destroyed by the rust, or as it is sometimes called by farmers, the blight and mildew.

The attention of Sir Joseph Banks, has been directed to the nature of this disease, and from the character of the learned President, much confidence should be reposed in his opinions.—He thinks the rust is a fungus or mush-room.

All perfect plants are furnished with pores upon their stalks and leaves, to enable them to absorb from the atmosphere, the watery particles held in solution, as well as to profit by any aqueous particles, which may fall upon the plant in times of rain and dew. These pores or little mouths are always open in moist weather and close when the atmosphere becomes dry.

An examination of a straw of wheat will exhibit to the view stripes, placed laterally and alternately. One set of these stripes are firm, the other cellular. The first set seems formed for the strength of the straw, so as to keep it from falling easily—the other set seems exclusively useful in conducting the juices from the roots of the plant upwards, and in taking up moisture from the surrounding atmosphere.

At the time these little mouths are open, the wheat takes the rust, by the introduction of the farina of a fungus; as soon as this farina is thus located, it takes root and shoots its fibres along these cellular stripes and becoming a growing vegetable or mush-room, appears upon the surface of the straw. There it matures very rapidly in warm weather, and if permitted to ripen becomes a nursery of numberless fungi, which in like manner impregnate other stalks. Sir Joseph Banks calculates that each pore may contain forty fungi and that each fungus sheds a hundred seeds.

I have heard the rust accounted for, by supposing the stalks of wheat, perforated by an insect, and that the rust on the outside was produced, by the sap exuding through these perforations, and becoming encrusted. The rust is not peculiar to England or America, but is found in the wheat all over Europe, and also in that imported into England from New South Wales.

It is produced by many varieties of grass, and abundantly by the Berberry bush, which if permitted to grow in or near a wheat field, will generally infest the wheat with rust.

Upon this subject professor Davy observes, "the popular notion amongst farmers, that the Berberry tree in the neighbourhood of a field of wheat often produces mildew, deserves attention. This tree is often covered with a fungus, which if it should be shewn capable of degenerating, into the *wheat fungus* it would offer an easy explanation of the effect."

Every farmer of observation must have noticed, that when the rust first makes its appearance in wheat, it is of an orange colour; in this state, Sir Joseph Banks recommends, that the bunches of wheat infected should be carefully removed. As the fungus matures, it becomes of a reddish brown colour; in this state its seeds are in a condition to be diffused by the air, and taken up by surrounding wheat.

Sir H. Davy observes, that "no remedy has as yet been discovered for this disease; but as the fungus increases by the diffusion of its seeds, great care should be taken that no mill-dewed straw is carried in the manure used for corn." A partial remedy seems also to exist, in freeing the ground from superabundant moisture, by water furrows, and in sowing the grain so thick as to prevent an excess of juice, in the stalk of wheat. When wheat is thick it ripens sooner than when it is thin, and the air cannot convey the farina or seed of the fungi, so easily as it can when it is very thin.

Every body knows that the grain of the wheat is injured by the rust, by the juices of the stem being taken up in the production of these mush-rooms. In like manner do the ivy, mos, and lichens, injure the vegetation of trees though in a very different degree.

There is every reason to believe from the researches of Sir Joseph, that the smut in wheat is produced by a very small fungus, that fixes on the grain. The products that it affords from analyses, are similar to those afforded by the puff-ball; and it is difficult to conceive that without the agency of some organized structure so complete a change should be effected in the constitution of the grain. Before the head has been exposed without covering to the atmosphere, I have divested it of its covering and have always found the head a mass of dark powder. It must be very difficult for the farina to impregnate the head, when so securely covered.

VIRGINIENSIS.

Virginia, August 12th, 1820.

FOR THE AMERICAN FARMER.

The Berberry Bush.

Dear Sir—A correspondent in your last number, has introduced the Old Story of the influence of the Berberry Bush on grain. It has long been admitted by farmers in this and other countries, though never believed by botanists, that wheat in the neighbourhood of this bush seldom escapes the blight. It appears from this communication, that *Rye* and *Barley* failed from the same cause, the farina from the blossoms of this dreadful plant.—The *Berberis*, pipperidge or pipe-ridge bush, which grows in England spontaneously in hedges, and cultivated in our gardens for the beauty of its blossoms—for its fruit for pickels and preserves, and its bark and roots for medical purposes; it does not I am sure possess such baneful *effects*. The Berberry blooms in Maryland about the same time the gooseberry and red currents blossom, sometime before the *Triticum* is in flower.

The distinguished President of the Royal Society of London, Sir Joseph Banks, has published a paper on the maladies of wheat, principally those denominated Blight, Mildew, Rust, &c. It is his opinion, that the blight or rust, is occasioned by a yellow parasitic fungus.

This may be the case in England, but I suspect our climate is *too hot* for the production of this variety of the mushroom, *on the wheat plant*. It may be possible that the Berberry bush, may be troubled with the raising and scattering the seed of the *Fungi*, or some other destructive plant, but I have not been fortunate enough to make the discovery.

It is true the bark of this bush will make a handsome yellow dye, and is used for that purpose, but its being of a dark brown colour something like the blighted heads of wheat, is no proof of its being in any way injurious. The sagacious *Tull*, and some other farmers of great observation, attributed the loss of the crops of wheat to this plant more than a century ago and recommended that they should be carefully eradicated from all lands appropriated to tillage. But if my memory serves me correctly, I think the late Ar. Young recommended it for hedges. It is affirmed by others of equal reputation, to be the work of an insect having a striking resemblance to a louse, and when first distinguished by the eye, to be of a red colour, resembling a boiled lobster, which gradually changes from red to a dirty black colour.

This insect is represented to be more destructive in wet than in *dry seasons*. This I do not mention on the authority of my own observation, as I have seen but very few blighted ears. But I am sure whenever the true cause is ascertained satisfactorily, it will turn out to be atmospherical; and that the insects or mushrooms follow the blight instead of preceding it. At one time I had an opinion that the *smut in wheat*, was occasioned in the first instance by little insects, resembling wood-lice in shape, but considerably smaller—and I was about making you a communication, but discovering a quantity of small black bugs about one fourth the size of the small beetles, called by children the lady birds, much about the smutty heads, I in some manner changed my opinion. I now suspect this bug feeds upon the lice that subsist upon the farinacious aliment of the grain. Let any one examine with attention a new smut ball, before it has turned perfectly black in the sun, or by a candle, or with a burning glass, and these little animalcula will be discovered. I have made some interesting experiments with smutty wheat, and intend soon to furnish you with the particulars.

The result is different from the statement of the Hon. Mr. Barber. I consider all the steeps recommended as idle and absurd—and that the smutty powder has no more power of entailing the smut in the next crop, than if you *had rolled it in lampblack*. I must beg you to put down what has been published about burning, liming and medical steeps, as applications for removing the smut to be a *hoax*. I suspect the smut will turn out to be partly owing to the capriciousness of the atmosphere—and that the little insects only feed on the putrid sap. Whether they come before or follow the change of the head from green to black, I cannot speak with certainty. I must take another year to satisfy myself on this head, as my experiments are not conclusive. The practice of putting the seed of wheat into a vessel to be filled with water, to be stirred frequently to bring up the light grains, and to be carefully skimmed off, is certainly better than steeping. But I must confess I have not discovered any difference between soaked and unsoaked seed wheat. I am glad you have introduced into the "American Farmer," the communication of the Cecil Farmer. This gentleman no doubt believes in the miraculous effects of the Berberry Bush on grain crops. *We differ greatly*—I do not believe it is attended with any more pernicious consequences to the wheat crop, than the *Saint John's Wort, or Indian Corn*. I know it will so turn out, when proper experiments are made.

I did understand, and I know it is believed by many persons of great information, residing in Elkton, that a Berberry bush, once growing in a garden in that place, was the *only cause* of the failure of wheat for many years, until Mr. Henry Alexander of your city, discovered the plant, and had it destroyed. It is reported since the destruction of this fatal bush! the crops has been remarkably productive!!

You have the means of collecting the facts.—Although this bush is destroyed and the crops have been since good, it does not change my opinion. The loss of the crops must be attributed to some other cause. It was not the blight that caused the loss of grain; there was an abundant crop of straw, which must have been bright, as it did not appear to be diseased, as the deficiency of grain was not discovered until it was got out. It may be fashionable to charge the poor bush as being the cause of the disappointment.

I must regret its loss, as it most certainly died innocent of the charge. Can any one be brought to believe that the farina of this bush, would be gifted with the power of destroying a whole field of wheat? If it has such power it surprises me. Had the *Cecil Farmer* thoroughly examined into the time of the flowering of the Berberry bush, into the quantity of *pollen* the blossoms afforded, he would have been convinced that the wind did not act as a conductor to scatter its *blasting dust* over the whole field, to make war on the *farina* of its harmless neighbour's wheat, rye, and barley. "It would have required a vast quantity of farina indeed." But unfortunately the two plants do not blossom precisely at the same time, if they did, I am sure the *one* would not *behave so barbarously to the other*. It would certainly have pity and compassion if it was only for the sake of man.—I cannot therefore believe, that wheat has so severe an antagonist. I think I can now account for the loss of grain, to your satisfaction; there is no doubt on my mind, although I have not seen the field, that the loss was occasioned by the farinas being washed away, at the time the wheat was in full blossom. That it was certainly washed away and not destroyed by the farina of the Berberry, appears from what is stated regarding the straw, it being represented equal to any in the neighbourhood.* This is proof of its being a luxuriant crop.

I have known entire fields of wheat to be in the same situation, producing little or no grain, from having its fecundating dust washed away from hard rains. This is the occasion of the deficiency in the grain. I have also known fields that were the admiration of this neighbourhood, to fail in producing the fourth of a crop from rotting at the root from too much moisture, the rays of the sun, not being able to penetrate, from the luxuriance of the plants.—The wheat of the Cecil Farmer must at one time have appeared pleasing to the eye, and offered a handsome return for his industry, or its sickly appearance would have been mentioned in his communication. That there was neither blight, rust, or mildew I am certain, or the heads would have been examined before harvest, and the short crop, ascertained.

A few years ago a similar occurrence took place at Belmont, the farm of the late Mr. A. C. Hanson, who in the few last years of his life became distinguished among us as an agriculturist. I have understood that he considered the failure as owing to the Berberry. Judge Ridgely lost a field of wheat, the same season. There is a bush it is true growing in his garden, in fact they are found to be growing in gardens of all the old established farms in this neighbourhood. Dr. Allen Thomas, a neighbour of the Judge's, had his best wheat growing this year, in the vicinity of a Berberry bush. The fly and blue grass have been great enemies to the *wheat* this season, but I have not heard the Berberry blamed for the deficiency.

Now for the conclusion.—Let the lovers of the wonderful, sow some wheat around the favourite *bush*, and I am sure they will have the mortifying disappointment, *if it is only put on well*, and in proper time, of reaping a good crop!

There is nothing so easy to be decided by experiment, as the time of seeding is fast approaching. I wish this Berberry bush affair submitted to the slow process of trial, one year will be enough to overturn the *old story* by the undeniable test of proof. R.

Felicity Farm, Aug. 14th, 1820.

To J. S. Skinner, Esq.

* It is impossible that the *blight* should make the grain miscarry. It is impossible that the farina could be destroyed by the same acid disposition.

FOR THE AMERICAN FARMER.

Locust Hill, Franklin County, Ky. 30th July, 1820.

Mr. Skinner,—The subjoined preparation of the nut of the native Coffee Bean tree, or Pea Locust Tree, has been found to destroy flies more certainly than any preparation I ever saw. It is now used by many in this neighbourhood.—I never heard of it until this season.—There is no danger to children or any animal from the preparation.—I have been familiar with the nut for more than 30 years; it grew in my father's yard, and is in abundance in my wood pastures. I have several times eaten the kernel of the nut raw, but never of many at a time—when roasted many are fond of them, and I have eaten a good many that way, I have never myself seen them used for coffee, but have heard of their being so used as a matter of *curiosity* not of *choice* or *economy*.—The cattle eat the pods including the nuts in the winter, as they do the wild honey locust pods; but the nut owing to its hard shell does not digest, but passes off whole. I have known children eat the green glutinous matter within the pod, as they would that of the wild honey locust, but it brings on sickness and puking.—The nut itself is so well understood to be harm-

less and eatable, that the coffee mill has been most usually made use of to prepare the nut for the flies. Yours, &c.

M. D. HARDIN.

Take the nuts of the native pea locust or coffee nut tree,* crack them and take out the kernel raw; reduce them to meal or powder, (a coffee mill or mortar are commonly used) put this into as much sweet milk as would make it into a paste. To this add some sugar to make the flies more readily eat it, put it into a plate or other vessel, and set it where you want to destroy the flies.

* Two names for one tree, not two trees.
See American Farmer, No. 52, Vol. 1, page 412.
Ed. Am. Far.

FOR THE AMERICAN FARMER.

HESSIAN FLY.

Farmers have long been divided in opinion, whether the egg of the Hessian Fly is deposited on the leaf of the wheat in the fall, or in the blossom, or tender grain in the spring of the year. I have often been surprised that no attempts have been made finally to settle this contested point, which could easily be done, were a few of the numerous gentlemen who have green houses, or who could spare a room for that purpose, to sow little parcels of wheat in boxes at the time they sow their fields. I would advise that the boxes be carefully housed at the time it is supposed the fly is depositing its eggs in the field; to do this the more effectually, the room in which the boxes may be deposited, should be perfectly tight, and the windows and doors be kept carefully closed, so that it would be next to impossible for the fly from abroad to enter. When there is good reason to think the danger over, the boxes should be removed to the open air, and suffered to remain there till the wheat ripens. If the wheat sown in the boxes and in the field be alike, and if that sown in the boxes escape, whilst the other is injured by the fly, there will be reason to think that the egg is deposited on the leaf in the fall; if, on the contrary, the wheat so carefully housed, as well as that in the field, be attacked, we may conclude that this great enemy is in the seed grain itself. In this case our intelligent farmers will see the utility of soaking their seed wheat in strong brine, lie, &c. as has been so often recommended. It is to be hoped, Mr. Editor, that some of your many correspondents will try the experiment and favour us with the result. R.

FOR THE AMERICAN FARMER.

Jerusalem Artichoke.

Mr. Skinner—Among the valuable roots mentioned in the American Farmer, I have not yet seen the Jerusalem Artichoke. It is, nevertheless, from what little I have seen of it, much more valuable than either Mangel Wurtzel or Ruta Baga, and of course must be well worthy the attention of the agriculturist. In the first place it answers almost in any soil, but of course the richer the better. It gives from 800 to 1000 bushels per acre. It stands our most severe winters, and requires but once planting, which is done after the manner of the potato; it is greedily devoured by hogs, and milch cattle are greatly improved by the use of it, which requires but little trouble in preparing it for them, which is merely done by washing them, (requiring no cutting as with potatoes,) You will perceive that by their requiring but once planting, that they should be put only in ground that should be appropriated solely to it, as it is very difficult to be eradicated. I think that the stalks might be converted into a valuable fodder, by cutting as the seed ripens (which is like that of sun flower) and put on a house as corn tops. Hoping what I have communicated may prove serviceable to my fellow farmers, I remain your most obedient,

AGRICOLA.

FOR THE AMERICAN FARMER.

Bed Bugs again.

Traveller's compliments to the person who selected and altered one of his prescriptions, and informs him that those receipts were not formed without due consideration. In the first place as to their scientific character, as well as their convenience and validity. Spirit dissolves very small portions of corrosive sublimate, and requires much time to do that.* It also increases the danger of the article, for drunkard's, like the Cimex, are enticed by smells. But water, impregnated with a little crude sal ammoniac, has no smell, and will readily dissolve an ounce of corrosive sublimate in a porter bottle of water, and this may be coloured blue, black, or green, so as to alarm any person to whom it might be incautiously presented. By dissolving so much corrosive sublimate, a small chrystallization may be made, where the wash is freely applied, and without that the prescription is nearly good for nothing; for if we are to apply it *to the bug* we might as well apply a hammar to his head and make a sure work. The bottle with my prescription, though so much more efficacious, may be marked *one poison*, whilst the spirituous tincture which is greatly inferior, may be marked *two poisons*† or poison for men and bugs.

P. S. In B. M'Mahon's gardening, there are some prescriptions with the corrosive sublimate, to destroy insects in hot house and garden plants, and the solution is directed to be made with *spirit of sal ammoniac* and water, but I hope none of those who intend to follow my prescription will be so unfortunate—for this article, though nearly the same in some respects, completely destroys the poison.

* It is probably owing to putting quantities of corrosive sublimate to spirit or whiskey, which only dissolves a little, and leaves the balance adhering to the bottom of the bottle, that such dreadful accidents have happened to those who buy old bottles to put beer and cider in. They should be scoured with lie.

† A *simple* for bugs, a simple compounded,
Another for men, where both are confounded.

FOR THE AMERICAN FARMER.

White Wash.

Now is the time to white wash, both for health and neatness; but as money is scarce, and the price for performing that operation very high, it will be omitted by too many for want of knowing how to compose a good wash. The articles are salt and lime, which almost every body knows; and yet few make a good wash because they err in the quanity. The water must be made a *strong brine*, and even saturated with salt before the lime is put in to slack It will then adhere. To this, some put a little soap; others a little molassses, but it is not necessary. In cities the white wash soon becomes defaced, owing to the dust of vegetable matter flying in the air, which when lodged on the walls or painted wood, only requires to become wet by a damp spell of weather, to give out a true manure water, of the same colour and quality, running like an alkali in every direction. It is therefore doubly necessary to wash the walls often.

If molasses is used, it makes the wash yellow for a few days; it is best on brick works.

E. A. F.

Occasional Extract.

TO THE EDITOR OF THE AMERICAN FARMER

Carlisle, Penn. 5th July, 1820.

I wish very much to procure some seed of Talavera Wheat and potato, Oats, and a good breed of Hogs, and Cows, and if these or any of them are to be obtained within a reasonable distance, I will thank you to inform me where I can be supplied with them, and their probable cost.

I am, very respectfully, sir,

Persons having any of the above articles for sale, would do well to make known their quality and price, through the medium of this paper.

Ed. Am. Far.

POETRY.

FROM THE FRANKLIN GAZETTE.

STANZAS,

TO A LILY HALF BLOWN.

Lovely blossom welcome here,
Flowret which I love so well;
Fairest of the gay parterre,
Lily of the spotless bell.

In the low sequestered dale,
Sheltered from the mountain storm,
Sweetest of the sylvan vale,
Spring unfolds thy slender form.

Dearer far thy virgin hue,
Shrinking from the gaze of light,
Than the rose which loves to shew
Conscious beauties to the sight.

In retirement still concealed,
Type of modesty art thou;
To the graces half revealed,
We delighted, willing bow.

Bloom, O bloom, thou lovely flower,
Fairest of the laughing dell;
Queen of Flora's native bower,
Lily of the spotless bell. W.

THE FARMER.

BALTIMORE, FRIDAY, SEPTEMBER 8, 1820.

Present Prices of Country Produce in this Market.

Actual sales—Wheat, 80 cts. Corn, 42 cts.—Rye, 40 to 42 cts.—Oats, 20 to 25 cts—Hay, per ton, $14 to $15—Straw, $9 to $11—Herrings, No. 1, $2 75 to $3—Do. No. 2, $2 12½ to $2 50—Shad, No. 1, $6 to $6 50—Do. No. 2, $5 to $5 50—Pork, prime per cwt. $14 to $14 50—Beef, from $11 to $12 50—Flour, from the wagons, $4 50—Whiskey from do. 34 cts—Butter, pr. lb. 20 to 25 cts.—Eggs, per dozen, 12 to 15 cts—Veal, per lb, 6 to 8 cts.—Lamb, per quarter, 37½ to 50 cts—Beef, prime pieces, 8 to 10 cts.—Hams, 14 cts—Middlings, 10 cts—Live Cattle, $6—Chickens, per doz. $2 to $2 50—Potatoes, 37½ to 50 cts—Tar, $2 25 scarce—Turpentine, soft, $2 25—Spirits, do. 35 cts—Pitch, $2 25—Bacon, hog round, 7 to 8 cts.—Lard, 11 to 12 cts.—Pork, prime 12 to 14 cts.—Black-Eye Peas, 65 to 70 cts.—Shingles, best, Deep Creek, $8 50—Do. Small, $4 75 to $5,—Flooring Plank, 5-4, $26—London White Lead, $4 25—American do. $3 75—Boiled Oil, $1 37½—Feathers, 50 to 62½ cts.—Cotton, Upland, 20 to 21 cents.

Actual sales of Maryland Tobacco, since last report.—August 31st, 5 hhds. from Baltimore county, at $16 fired—2 hhds. one second, $6, 1 crop, at $14 fired, from Montgomery county—September 1st, 11 hhds. 2 second at $8—9 hhds. crop, at $13, do. from do.—2 hhds. crop, at $15 37½ fired from Poplar Spring, Anne Arundel county—2 hhds. crop $18 25, fired from do.—Sept. 2nd. 8 hhds 2 second at $6—5th crop, at $10—1 do. at $8 from Friendship—2 crop, at $12 50, from Montgomery county—10 hhds. crop, at $13—3 second at $11, from Elkridge, Anne Arundel county—Sept. 4th, 4 hhds. at $10—1 do. at $8, from Montgomery county. No sales Virginia Tobacco.